Interrelated Decisions: The Impact of the Timing of Lifecourse Events on Rates of Transitions from Cohabitation to Marriage

Early research on changing patterns of marriage and cohabitation often surmised that marriage and cohabitation would become similar in such things as stability and protective effects, such as greater happiness and health, over time as cohabitation became more common and accepted. However despite increasing cohabitation and social acceptance of alternate family formations marriage and cohabitation continue to be different in terms of protections and stability (Brown and Booth 1996, Elliott and Umberson 2004). People that cohabit before marriage are also at higher risk of divorce than those that do not (Bumpass and Lu 2000, Bumpass and Sweet 1989). Additionally, there seems to be a widening gap in racial and socio-economic groups. Blacks and individuals with lower income and education increasingly enter into less stable cohabiting relationships and have low rates of transitioning to marriage, while wealthier individuals and whites enter directly into marriage or transition into marriage (Cohen and MacCartney 2004, Bulcroft and Bulcroft 1993, Loomis and Landsdale 1994). This makes it very important to understand the mechanisms that encourage transitions from the less stable cohabitation to the more stable marriage.

According to Andrew Cherlin (2004)a couples decision to marry comes as a signal that they have achieved the other individual goals in their life. This means that the decision to marry is related to other decisions and achievement of other goals. Because of the interrelation of these events timing matters. Much of the research on transitions to marriage, including the research transitions from cohabitation to marriage, focus on having certain things such as a higher level of income, a child or the number of children,

1

a high school or college degree. Although it is clear that these things matter for marriage transitions they are unable to fully explore the importance of timing and how it relates to marriage transitions.

One of the most difficult concepts to grapple with, when dealing with factors that influence transitions to marriage, is the idea of causality. It is difficult particularly when dealing with events such as childbirth or buying a home to claim the direction of causality. Although childbearing and home buying can be summed up by a single date, date of childbirth or date bought home, a significant amount of time energy and planning happened before this date. A marriage date also frequently implies a great deal of previous planning and decision making before the actual wedding date. This makes causal claims difficult; did a couple decide to marry because they now owned a home or did they purchase the home because they were planning to marry. For cohabiting couples is there a substantial difference between marrying and buying a home a few months later or buying a home and marrying a few months later? Because of this difficulty it is best to look at events as interrelated rather than causal. A couple may be making simultaneous decisions on marrying, buying a home, and having a child and the actual order of events may be different and still part of the same process. They may also anticipate the occurrence of an event such as finishing a degree or conceiving a child and this may impact other decisions such as choosing to marry. This makes event history an ideal form of analysis because we can look at events that happen around the same time as transitions to marriage to determine if the timing of having these events are related to the transition to marriage. The purpose of this paper is to explore how the timing of marriage transitions from cohabitation relates to other lifecourse events.

This paper focuses on three questions. First, does experiencing other life course events such as childbirth or buying a home impact the rates of transition from first cohabitation to marriage? Second, how important is the timing of these events? Is there a window of opportunity where these events have a greater chance of influencing transitions or does home ownership or having a child increase the chance of transitioning overall? Third, are there racial or socioeconomic differences in these transitions?

Based on previous research the following hypotheses have been formulated.

Hypothesis 1- Home ownership will increase the rates of marriage. Rates of transitioning to marriage from cohabitation will be higher around the time of home purchase than they are at other times during the cohabitation.

Hypothesis 2- Having a child in general will not significantly impact the rates of transitioning to marriage; however the rates of transitioning will be higher around the time of childbirth, particularly for a first child

Hypothesis 3-Blacks and individuals with lower income will have lower rates of transitioning from cohabitation to marriage than whites and individuals with higher income.

Data

The Data from this study came from the National Survey of Family and Households (NSFH). The NSFH is a good source of data for this question because it gathered a large amount of life course data including complete union histories, work histories and education histories. Cohabiting couples and racial minorities were oversampled; this allows a large sample size of respondents that are of interest for this study. There are three waves of data in the NSFH: 1987-88, 1992-94, and 2001-02. At each wave the NSFH collected not only data on current relationship status, work history, number of children, education; but also collected data for the periods between waves. This allows for a rich set of information to analyze events over time.

There are a few challenges to using the NSFH data for this question. Data is individual level rather than couple level data. Although some information on partners was collected and in many cases partners were interviewed, it was specific to the current partner (or the first married partner in NSFH Wave 1) and therefore does not always match up to the partner of first cohabitation. Ideally we would use couple level data for questions on marriage transitions but a survey such as the NSFH with large nationally representative sample allows for good analysis of patterns even with individual data.

Some variables such as income are only measured at the time of interview. This means that income for each individual must be inferred from only three points of time. This is primarily a problem for analyzing respondents with a cohabitation that began and ended before the first wave of data. This is a problem that would occur in virtually any large sample of family and life course data and not a particular problem with NSFH data.

One problem that is unique to the NSFH data is due to an interview error in wave 3. Respondents that were cohabiting in wave 2 were not asked if they were still cohabiting in wave 3. These respondents have been removed from the union history file while their information is being reconstructed. Although this is less than 5% of respondents that had ever been in a union some of these respondents would be in first cohabitations and therefore included in this analysis. It is possible that this omission may slightly bias this sample but given the large sample size still available the main patterns would most likely be similar if the omitted cases were in the analysis.

The sample was limited to respondents that had ever cohabited and were interviewed in all three waves. Only first cohabitations were analyzed. The final sample had an N of 1560. Sixty-two percent (968) transitioned to marriage. The sample was 62% female, 72% White, and 21% Black. Fifty-six percent had been married and divorced before first cohabitation. All three waves were used to compile complete union, work, childbirth, and education histories for respondents.

Methods

Event History analysis is used to examine respondents in their first cohabiting relationship. It is possible that their are different mechanisms in transitions from the first cohabiting relationship than from subsequent cohabiting relationships so for the purpose of this paper only first time cohabitations are counted. Time is measured in months of cohabitation. All first time cohabiting respondents are considered at risk for the event of marriage from the date they begin cohabiting. Transitioning to marriage is the

dependent variable. Respondents are censored when they leave the risk set by marrying, or breaking up.

Independent variables

Because the focus of this paper is not only on the impact of having a lifecourse event such as education or owning a home on marriage transitions but also how the timing of these events impact transitions two separate variables were constructed for home ownership. First a time varying dummy variable for home ownership was constructed. This variable was 0 before a home purchase or if no home was ever purchased and 1 from the month of home purchase until the respondent was censored from the analysis. This variable measures the impact of owning a home. The second variable measures the impact of buying a home. To measure the effect of buying a home a time varying dummy variable was constructed where 1 denoted that a home had been purchased. Because the analysis time is in months and as discussed earlier home purchase takes time and may not need to be at the exact time as marriage to be related the variable has a 1 year range that includes the six months before and the six months after the date of home purchase. Future analysis may vary this variable to smaller or larger ranges as well as look at the time just before or after marriage.

Like home buying childbirth has a substantial time of investment beforehand and so similar variables were constructed that considered both having a child and childbirth. Previous research on children and transitions to marriage has found substantial differences in the impact of first births and subsequent births so variables were constructed to capture that difference. Three time varying dummy variables were

constructed. The first variable measures the impact of having any children and equals 1 from the time of birth of the first child until the respondent is censored from the sample. The second measures the time of birth of the first child and is 1 for the month of birth as well as the six months before and after birth. The third measure is 1 at the time of birth (as well as the six months before and after) of any other child.

The other variables of interest in this study are race, and socioeconomic status. Variables added as controls because of theoretical significance include age(log), previous marriage before cohabitation, and if respondents parents had divorced during the respondents childhood.

Because most research focuses on black white differences race was coded into three categories black, white and other. White was used as the reference group for analysis.

A time varying variable for income was created using the three reported values at the waves of the NSFH interview. Income from wave 1(87-88) was used for months proceeding wave 1 up to wave 2. Income from wave 2(92-94) was used for months up to wave 3, and wave 3 was used for months in 2001-02. Missing values of wave 1 income were filled in using wave 2, missing values for wave 2 income were filled in using wave 3, and missing values for wave 3 used values from wave 2. This is meant as a baseline income value because income values are not available at all time periods of cohabitation. Future analysis will include education for more accurate socioeconomic estimation. Income was logged because of a highly skewed distribution and age was logged to account for non-linear effects of age.

Models

Cox models were calculated using the Efron method for ties. Because the cox
model does not make any assumptions about the shape of h(t) and my variables of
interest do not address any particular form of the hazard. Because part of my argument
is that events for individual respondents are not independent, the variance covariance
matrix was created using the robust method.

Two models were built to look at the timing of life course events. The first model
(table1 model 1) included the race, income, control variables and variables for owning a
home and having a child. The next model (table 1 model 2) included variables for
buying a home, birth of first child, and birth of any subsequent child instead of owning a
home and having a child variables. Then models were calculated including cohort
variables into model 2(table 1 model 3). Piecewise models were used to address
violations of the proportionality assumption in the cohort variables (see figure 8). Three
piecewise models were calculated using duration of cohabitation. The time points used
to split the model were durations of three months or less(model 4), four to 18
months(model 5), and over 18 months[i](model6).

Results

Time trends in transitions to cohabitation

The hazard rate in general is highest in the early months of cohabitation and drops steadily after that, chances of marrying are highest in the first few months of cohabitation (see fgure1). This trend is not as pronounced for blacks (figure2). Blacks have a fairly flat rate of marriage over time that is much lower than the rate for whites.

Rates of marriage are similar for those that own a home (figure3) compared to those that do not; those that have at least one child (figure 5) also have similar hazard trends to those that do not. However rates of marriage are higher for respondents that married within six months before or after buying a home (figure 4). Rates are also higher for respondents that married within six months before or after having a child (figure 6 &7).

Cox Models-

Both owning a home and buying a home significantly increased the rate of marriage, but buying a home has a much larger impact on the rate. Owning a home increases the rate of marriage by about 26% over not owning a home. Buying a home increases the rate of marrying by 100%. This is confirms Hypothesis 1.

Having a child does not significantly increase the rate of marriage but the timing of having a child matters. Having a first born child around the same time as marriage increases the rate by 283%. Having a subsequent child around the time of marriage increases the rate by 61%. This confirms hypothesis 2.

Higher levels of income increase rates of marriage. Although the rate of marriage for respondents in the other race category does not significantly differ from whites,

blacks have lower rates of marriage across all models. In model 2 being black reduces the rate of marriage by 46%. This is confirms hypothesis 3.

Discussion

The relationship of buying a home and childbirth and the rate of marriage shows the importance of timing in the decision making process of marriage and confirms the interrelatedness of those decisions. This shows the importance of looking not only at direct causal relationships in the timing of lifecourse events but also at the more complicated interrelation of joint decision making processes. Further research can explore how the timing of other events such as education, work experience, occupational achievement, debt, and savings relate to the marriage decision making process. Additionally, timing can be explored more fully. For example does purchasing a home have a similar effect within three months, six months, a year?

Further research should also focus on questions of race. Previous research shows differences between blacks and whites continue even after controlling for income, education and other variable of socioeconomic status. This research shows large differences in rates of marriage between blacks and whites even when controlling for home purchases and childbirth. Further research needs to explore the timing of lifecourse events and racial differences. Perhaps transitions do not affect each group equally. There could be variables that impact transitions for blacks that have not been fully explored

Works cited

Brown, Susan L. & Allan Booth. (1996). Cohabitation Versus Marriage: A Comparison of Relationship Quality. *Journal of Marriage and the Family*. 58:668-678.

Bumpass, Larry L. & Lu, H. H (2000). Trends in Cohabitation and Implications for Children's Family Contexts in the United States. *Population Studies*. 54:19-41.

Bumpass, Larry L. & James A. Sweet. (1989) National Estimates of Cohabitants. *Demography*. 26:615-625.

Bulcroft, Richard A. & Kris A. Bulcroft. (1993) Race Differences in Attitudinal and Motivational Factors in the Decision to Marry. *Journal of Marriage and the Family*. 55:338-335.

Cherlin, Andrew J. (2004). The Deinstitutionalization of American Marriage. *Journal of Marriage and Family*, 66:848-861.

Cohen, P. & MacCartney, D 2004 "Inequality and the family" *The Blackwell Companion to the Sociology of Families* Jacqueline Scott, Judith Treas, and Martin Richards eds Oxford: Blackwell Publishers.

Elliott, S & Umberson, D   2004 "Recent Demographic Trends in the US and Implications for well-being" *The Blackwell Companion to the Sociology of Families* Jacqueline Scott, Judith Treas, and Martin Richards eds Oxford: Blackwell Publishers.

Loomis, Laura Spencer. & Nancy S. Landsdale. (1994). Non-Marital Cohabitation and Childbearing Among Black and White American Women. *Journal of Marriage and the Family*. 56:949-962.

Sweet, James A. and Larry L. Bumpass, The National Survey of Families and Households - Waves 1, 2, and 3: Data Description and Documentation. Center for Demography and Ecology, University of Wisconsin-Madison (http://www.ssc.wisc.edu/nsfh/home.htm), 2002.
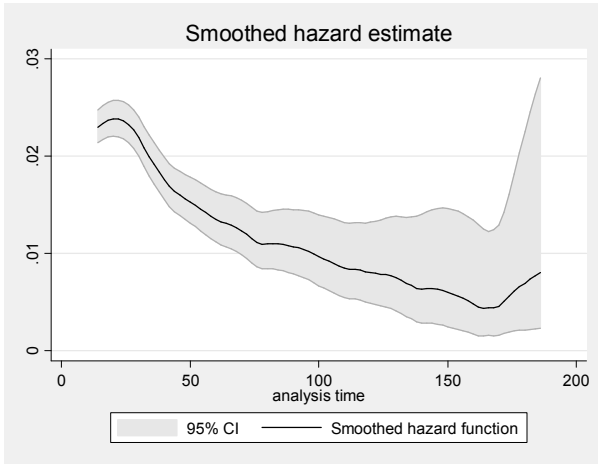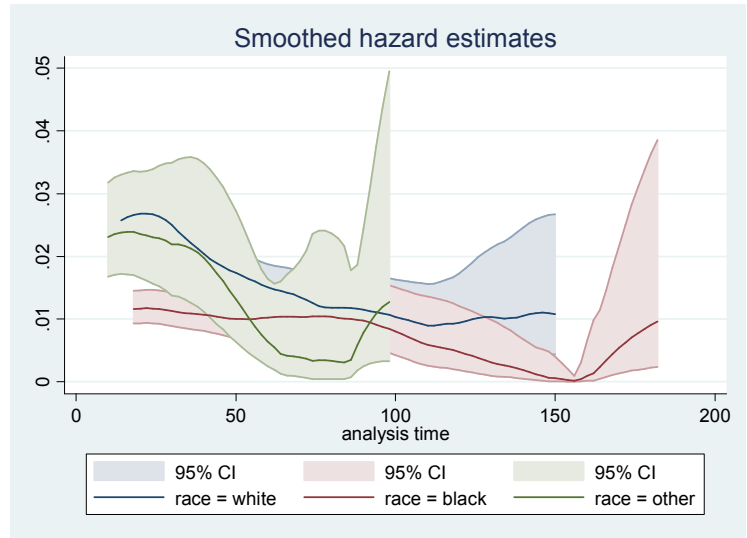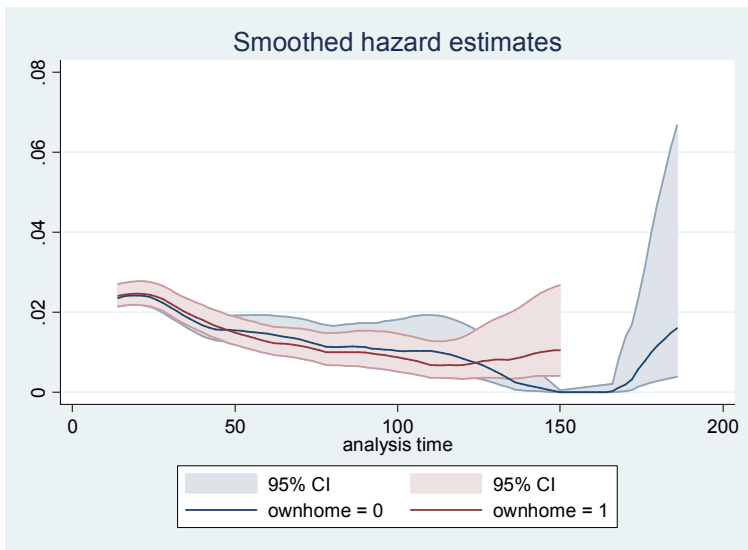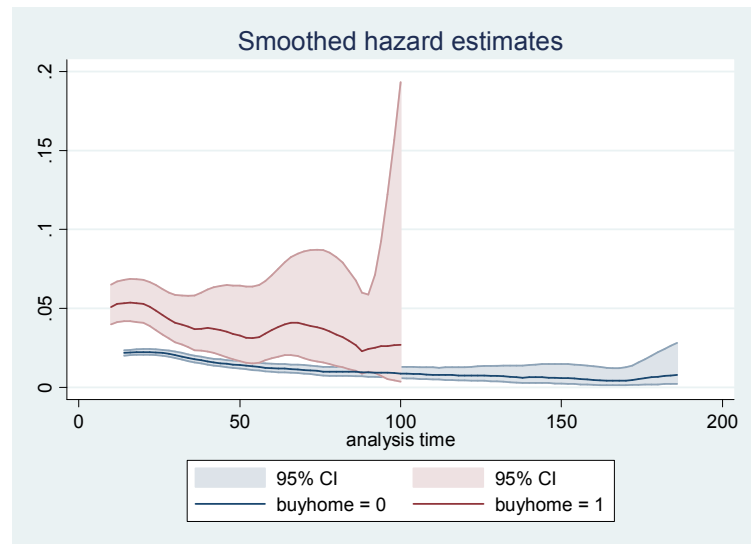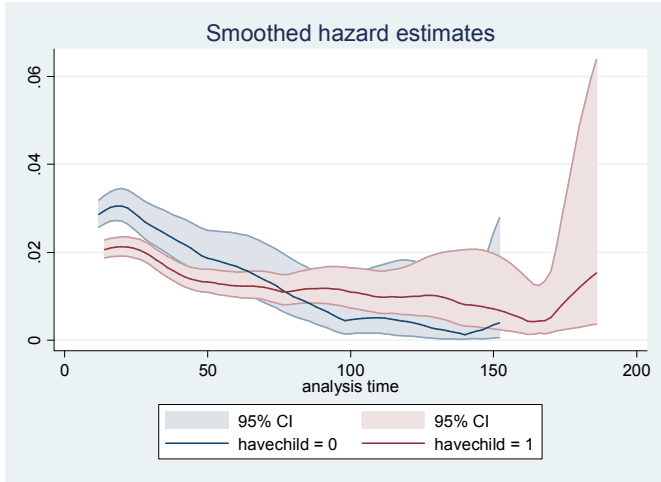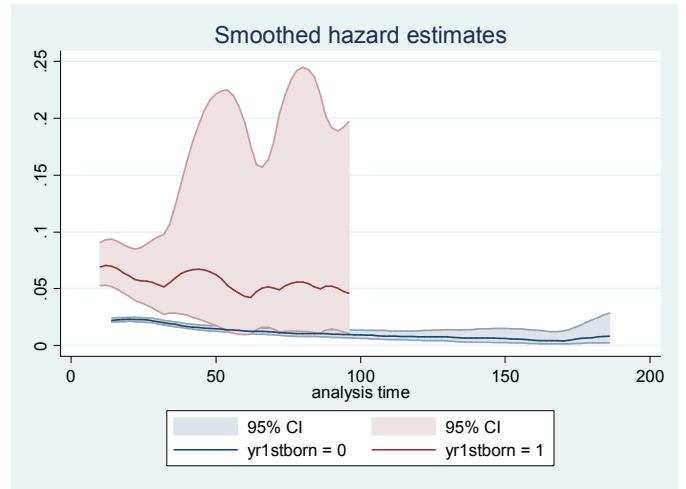
Appendix

Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6

Figure 7
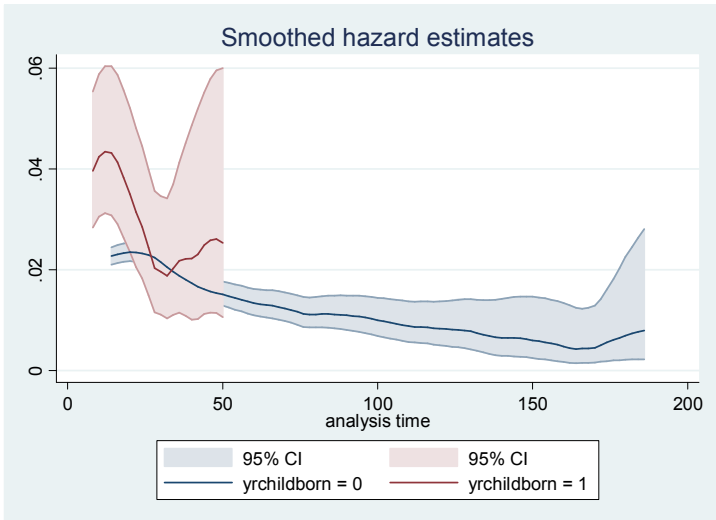

13

Table 1

	Model 1	Model 2
Sex	.0357609	.0261205
Age	-.6685766***	-.3305252*
Income	.1024626***	.1049833***
Married previous	-.0802341	.0219326
Parents divorced	-.0145002	.0281539
Black	-.581765 ***	-.6113304***
Other Race	-.1349217	-.2073071
Own home	.2328611 *	
Buy home		.6930372***
Have child	.0883923	
1st child born		1.041160 ***
Child born (after 1)		.4810032 **
Log pseudoliklihood	-6208.3008	-6165.6799

P<.05* P<.005** P<.001***